

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of BUCZEK et al. :
Serial No. 10/663,320 : Group Art Unit 1762
Application Filed September 16, 2003 : Examiner: JOLLEY, KIRSTEN

For: ARTICLE INCLUDING PARTICLES ORIENTED GENERALLY ALONG AN ARTICLE SURFACE AND METHOD OF MAKING

DECLARATION UNDER 37 CFR § 1.132

Andrew J. Skoog, hereby certifies the following:

1. I am a joint inventor of all the claims of the patent application identified above and I am a joint inventor of the subject matter described and claimed therein.
2. I have extensive knowledge of the compositions of superalloy and titanium materials and coatings applied over the substrates of superalloy and titanium materials.
3. The present invention, as claimed in the independent claims 17, 26 and 32 presented in the amendment filed January 27, 2006, include non-spherical metal particles within a coating medium that are physically separated from one another.
4. The physical separation of the particles within the coating medium is shown in, among other locations, Figures 5-10 of the specification of the above-reference application.
5. The physical separation of the particles within the coating medium is due to the surface tension of the selected particle and the viscosity of the coating medium, which is described at least on page 14, lines 11-13, 17-21 and 23-26; and page 15, lines 5-8 of the specification of the above-reference application.
6. The medium material contacts the particle and forms a barrier layer, which impedes particle-to-particle contact and allows movement of the individual particles within the medium.
7. In addition to impeding the particle to particle contact, the barrier layer resulting from the surface tension of the particle and the particle separation facilitates rotation in response to a force to provide the alignment of the particles in the major dimension.
8. The surface tension and gravity act further upon the non-spherical particles during curing, maintaining the separation between particles and permitting at least about 50% of the particles to be aligned in the direction of the major dimension, see e.g., page 15, lines 5-8 of the specification of the above-referenced application.

9. It is my opinion that the above discussed scientific principles, in addition to the explicit disclosure as cited above, both in the figures and in the specification, that one of ordinary skill in the art reading the specification of the above-referenced application would find the disclosure sufficient to enable one of ordinary skill in the art to make and use the invention, including the limitations "the particles being physically separated from one another".
10. I hereby acknowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon, and I hereby declare that all statements made in this declaration of my own knowledge are true and that all statements made on information and belief are believed to be true.

Andrew J. Skoog 6/21/06

Andrew J. Skoog